

AN ABERRANT FOOD-PLANT RECORD FOR *JALMENUS EVAGORAS* (DONOVAN) (LEPIDOPTERA: LYCAENIDAE)

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Abstract

Jalmenus evagoras (Donovan) larvae normally feed on *Acacia* spp. (Mimosaceae) but are here recorded feeding and completing development on the mistletoe *Amyema pendulum* (Sieb. ex Spreng.) Van Tiegh (Loranthaceae). It is likely that an oviposition mistake occurred due to the presence of attendant ants, the proximity of normal host plant and an expanding *J. evagoras* population.

Introduction

A small colony of *Jalmenus evagoras* (Donovan) at Griffith University, Nathan Campus, has been known and studied for several years (Smiley *et al.* 1988, Fraser 1997). The butterfly feeds exclusively on *Acacia* spp. (Mimosaceae) (e.g. Common and Waterhouse 1981, Braby 1988, Crosby 1994) and at Nathan the food-plant is *A. leiocalyx* (Domin) Pendley (Fraser 1997). The butterfly also has an obligate relationship with the ant *Iridomyrmex anceps* (Roger) (Pierce *et al.* 1987).

Since the colony was first recorded in 1988 it has been confined to the western end of the campus adjacent to the Ring Road (R. L. Kitching *pers. comm.*). However, during the summer of 1998 the colony underwent a population expansion and spread across much of the campus wherever its food-plant and attendant ants were present.

Observations

On 26 February 1998, one late instar and three smaller larvae of *J. evagoras* were discovered feeding on the mistletoe *Amyema pendulum* (Sieb. ex Spreng.) Van Tiegh. The mistletoe was growing on an overhanging branch of a small *Corymbia trachyphloia* (F. Muell.) (Myrtaceae) on a steep roadside bank approximately 60 cm from the ground. A small *Acacia leiocalyx*, approximately 1.5 m high, on which *J. evagoras* larvae were feeding, was growing within 60 cm of the base of the *C. trachyphloia*. Several other acacias within 3-4 m also had *J. evagoras* immatures. All were attended by *Iridomyrmex* ants and there did not appear to be any noticeable difference in ant attendance levels between those on the acacias or on the mistletoe. Adult *J. evagoras* were often observed flying around the mistletoe and nearby acacias and females were seen landing on the mistletoe and investigating the foliage.

The larvae on the mistletoe were periodically observed during a 16 day period. On 9 March one had entered the prepupal stage but on the following morning the prepupa had disappeared, possibly falling victim to jumper ants (*Myrmecia* sp.). Several of these ants were observed on the ground nearby and on the mistletoe and are known to be predators of *J. evagoras* larvae (Pierce 1984). On 14 March, two other larvae had disappeared but the

remaining one had pupated. This pupa was removed and a normal *J. evagoras* female emerged on 23 March (in author's collection). All the larvae feeding on the mistletoe appeared to develop at a normal rate.

Discussion

It is unlikely that all four larvae had strayed from the nearby *Acacia* to the mistletoe, since there was a thick leaf litter layer and terrestrial predators present. It is more likely that *J. evagoras* females made an oviposition mistake responding to the presence of *Iridomyrmex* on the mistletoe (see Atsatt 1981, Pierce and Elgar 1985). These mistakes often do not result in the successful development of the insect but, if successful, may be a precursor to speciation (Pierce 1984).

Females of *J. evagoras* usually oviposit on trees less than two meters tall (Smiley *et al.* 1988) and would not normally encounter mistletoe which is mostly confined to the upper branches of trees on campus (*circa* 15-20 m above ground). The unusual juxtaposition of plants, presence of suitable ants and the expanding nature of the butterfly colony probably contributed to the oviposition mistake. However, whatever the reasons, it is still significant that the larvae successfully completed development on the mistletoe.

Acknowledgment

I thank Mike Olsen (Griffith University) for identifying the plants.

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